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House and Landscape Pests

THE PEACHTREE BORER

Rodney L. Holloway*

The peachtree borer, *Synanthedon exitiosa* (Say), is a clearwing moth in the insect family Sesiidae. Its range extends throughout the peach growing areas of the United States with local populations varying extensively. Larval feeding damages peach trees, but can be controlled with proper management.

Life Cycle

Insects within this group change in appearance as they mature. They begin life as eggs, then progress to larva, pupa and finally adult stages. The young or immatures are caterpillars; the adults are moths.

Adults are small and have a wingspan of only 1 to 1½ inches. Females are black and have a single orange stripe on their abdomen. The female is larger and more robust (Figure 1) than the male. The male is also black, but is marked with numerous small, yellow stripes and lines.

Peachtree borer adults will be in the field for only a short time, generally July, August and September. They may be encountered individually a month or two before or after this time, but never in large numbers. During this peak period eggs are laid around the base of trees, and hatch in about 10 days. Newly emerged larvae bore into bark near the hatching site and begin feeding.

The life cycle is completed in 1 year. Eggs laid in August and September produce larvae which mature and become adults the next August and September. Growing larvae remain under the bark just a few inches from where the eggs were deposited. After the larvae mature, within 10 to 11 months, they pupate. Just before this stage the worms migrate from the feeding site into surrounding soil, construct a bullet-shaped cocoon and cover it with soil debris. This is usually under the soil within 12 inches of the tree.

After emerging from pupae, adults rest for a few days and then begin looking for a mate. This is accomplished by the use of a pheromone (odor). The female emits a pheromone detectable only by males. As the males search for a mate, they fly until detecting the female odor and move to the source. Flight is always upwind around noon on warm, sunny days. Bad weather will stop the mating process and most other flight activity. Egg laying begins a few days after mating.

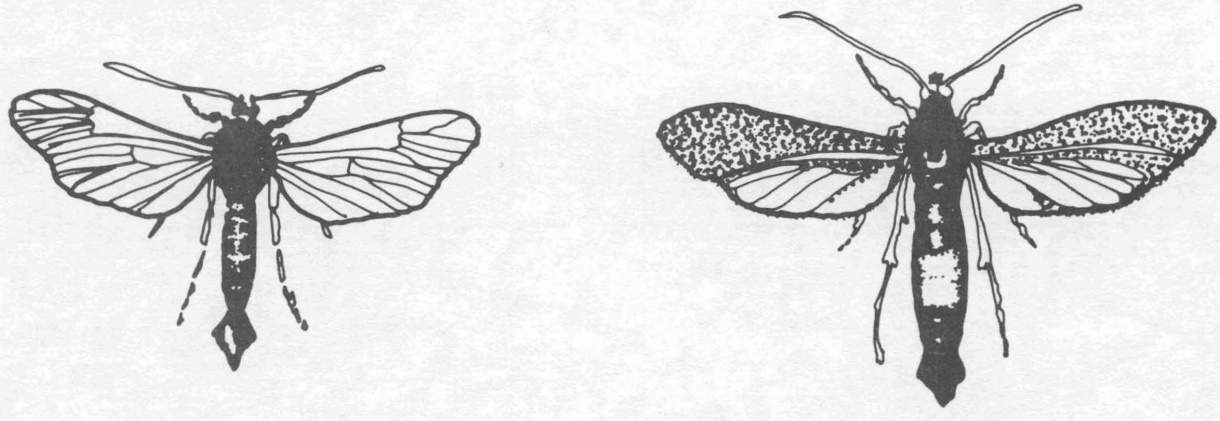

Figure 1. The female peachtree borer (at right) is larger and more robust than the male.

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Damage

The peachtree borers in the larval stage cause damage. After a small larva has entered the tree, it feeds in the cambium, an area just under the bark. Destruction of the cambium will hamper the tree's development. Since this tissue is continuous around a tree's circumference, some of it can be destroyed without damage to the tree. However, if the cambium is damaged extensively, the tree will die. Severely infested trees often can be identified by dead or dying scaffold limbs.

It is not known how many peachtree borer larvae it takes to cause economic damage. A single feeding worm can devastate a seedling 1 to 2 inches in diameter. A tree 10 to 12 inches in diameter may safely harbor 1 or 2 peachtree borer larvae. Any more should be treated.

Control

The peachtree borer can be controlled with certain agricultural chemicals. The pesticide solution should be either sprayed or poured directly on a tree's base. Those chemicals which can be formulated in water are mixed at a given amount (usually pounds) active ingredient (a.i.) per 100 gallons of water. One gallon of final spray would be required to drench the base of a large tree. Smaller trees would require less. Always apply enough formulated insecticide to thoroughly wet the target area.

Table 1. Chemicals Recommended for Peachtree Borer Control

Material	Amount/ gallon of water	Remarks
Chlorpyrifos (Lorsban®)	**7½ tablespoons**	**Make one application at the end of August. Do not contaminate fruit. Do not apply within 14 days of harvest.**
Endosulfan (Thiodan®)	**1½ level tablespoons**	**Apply once in early June and repeat in mid-August. Do not use within 21 days of harvest.**

Trees can be treated in the winter with mothball crystals (paradichlorobenzene). Place a circle of the material around an infested tree about 2 inches from its base and cover with 6 inches of soil. Use ¼ ounce of material for each inch of tree diameter measured 1 foot above the ground. Never apply more than 1 ounce per tree.

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